

DEFINITIONS AND SPECIAL INSTRUCTIONS

1. Scope of survey

This survey covers U.S. manufacturers of selected instruments and related products.

Shipments on consignments as well as for sale

Interplant transfers in which products are shipped from one plant of your company to another plant or sales branch

2. Figures to be reported

Companies with more than one establishment manufacturing the products covered by this survey are requested to complete a separate report form for each location. If you have not received a separate form for each of your establishments, please call the contact listed on the back of your cover letter or write to the U.S. Census Bureau for additional forms.

Exclude

Products manufactured for you by others

Products bought and resold without further manufacture by your company

Imports which are reshipped without further domestic manufacture

a. Quantity and value of shipments

The figures on quantity and value of shipments should include the physical shipments of all products sold, transferred to other establishments within your company, or shipped on consignment, whether for domestic or export sale. The value represents the net sales price, f.o.b. plant, to the customer or branch to which the products are shipped, net of discounts, allowances, freight charges, and returns. Shipments to your own branches should be assigned the same value as comparable sales to unaffiliated customers; i.e., the value includes an appropriate allocation of company overhead and profit. Products bought and resold without further manufacture should not be included in shipments.

b. Research and development

Dollar shipments should reflect income from development, design, and engineering services performed by the reporting plant in connection with the manufacture of the products shipped, whether included in a single production contract, or contracted for separately, but intended as preparation for the manufacture of the specific products.

c. Columnar structure of report

When entering your figures on the report, please be sure to report the information in the correct columns as follows:

- Column 1 — Quantity
- Column 2 — Value

Quantity of shipments should be reported in number of units; value of shipments, in thousands of dollars.

3. Definitions

The product detail for this survey, as shown in the Reference List, is defined according to standard nomenclature for this industry.

Include

All shipments, whether for domestic use or for export

4. Comparability

Data reported in this survey should correspond to data reported in the Economic Census - Manufacturing Sector form. The sum of values for item codes shown in column (a) should correspond to the dollar values reported under product codes indicated in column (b) below:

Current Industrial Reports (Form MA334B)	Economic Census - Manufacturing Sector
Item codes (a)	Product codes (b)
4001 through 4049	332911F 100
4073 through 4079	332911H 100
4202 through 4382	3345113 100
4420 through 4518	3345111 100
4521 through 4548	3391110 100
4551 through 4561	3345199 100
4571 through 4609	3345120 100
4612 through 4897	3345130 100
5390 through 5425	3345141 100
5504 through 5525	3345143 100
5531 through 5547	3345145 100
5610 through 5631	3345151 100
5701 through 5849	3345153 100
6001 through 6053	3345155 100
6101 through 6119	3345191 100
6201 through 6218	3345193 100
6601 through 6655	3345197 100
7001 through 7039	3345195 100
8001 through 8196	3345160 100
8211 through 8245	3333143 100
8379 through 8391	3333141 100

REFERENCE LIST

FORM MA334B SELECTED INSTRUMENTS AND RELATED PRODUCTS — SHIPMENTS		
Product code	Item code	Item description
		AUTOMATIC VALVES (REGULATING AND CONTROL TYPE) (Except Nuclear) <i>(Report quantity of shipments in number of units)</i> Automated control valves — Engineered specification valves, designed to perform a precise degree of continuous modulating (throttling) of controlled variables as the final element of a sophisticated instrumentation loop. (Commonly referred to as control valves and including certain globe, butterfly, ball, diaphragm, and similar body types but excluding on-off valves.) Pneumatic actuated Sliding stem valves Globe body All other types Rotary Valves: Ball Butterfly All other rotary valves (including eccentric disk) All other pneumatic power-operated control valves Parts of pneumatic actuated valves (sold separately) <i>(Report value only)</i> All other actuation, including electric-actuated and electro-hydraulic actuated Sliding stem valves Globe body All other types Rotary valves, including ball, butterfly, and eccentric disk All other power operated (except pneumatic) control valves Parts for all other power operated (except pneumatic) control valves <i>(Report value only)</i> Valve actuators (sold separately) Regulator valves — Regulator valves equipped with a self-generating power actuator acting in response and in proportion to a change in value of the controlled variable, such as temperature, pressure, flow level, etc. Remote-sensing direct actuated temperature regulators Self-contained direct actuated pressure regulators (except instrument type and safety relief valves) Pilot (internal and external) actuated pressure regulators Self-contained direct acting precision and instrument type pneumatic (air and gas) pressure regulators Flow regulators for gas, vapors, or liquids Other regulator valves Parts for regulator valves sold separately <i>(Report value only)</i> Total Automatic Valves (Regulating and Control Type) (Sum of item codes 4001–4049) <i>(Report value only)</i>
332911F101	4001	
332911F103	4002	
332911F105	4003	
332911F107	4004	
332911F109	4007	
332911F111	4008	
332911F113	4009	
332911F115	4011	
332911F117	4012	
332911F122	4015	
332911F125	4018	
332911F127	4019	
332911F129	4021	
332911F131	4025	
332911F133	4030	
332911F135	4035	
332911F137	4040	
332911F139	4045	
332911F141	4048	
332911F143	4049	
XXX	4059	

REFERENCE LIST — Continued

FORM **MA334B**

Product code	Item code	Item description
		SOLENOID-OPERATED VALVES (Except Nuclear and Fluid Power Transfer) — Solenoid-operated valves of the type actuated by the movement of a plunger or armature due to the magnetic field created by electrically energizing a solenoid coil (Exclude torque motor rotary type actuated valves and servo-valves.) <i>(Report quantity in number of units)</i> Solenoid-operated valves, except power transfer valves Commercial/industrial types Two-way Three-way Other Household appliance type
332911H101	4073	
332911H103	4076	
332911H105	4077	
332911H107	4078	
332911H109	4079	Parts, components, and operators for solenoid-operated valves, except nuclear and power transfer valves (sold separately) <i>(Report value only)</i>
XXX	4099	Total Solenoid-operated Valves, Except Nuclear and Fluid Power Transfer (Sum of item codes 4073–4079) (Report value only)
		SEARCH AND DETECTION, NAVIGATION AND GUIDANCE SYSTEMS AND EQUIPMENT <i>(Report quantity in number of units)</i> <i>Report all navigation systems for aircraft, ship, and ground navigation below. Report all instruments shipped separately in product class 3345111, pages 7 and 8.</i> Light reconnaissance and surveillance electronic systems and equipment (infrared, ultraviolet, and visible light) Bomber-defense equipment Fire control equipment (except optical systems) IR fuses Space satellite and other IR detection and warning systems "Sniperscopes" "Snooperscopes" Night driving equipment Mapping equipment Photographic equipment Wake detection Other Electronic checkout, monitoring, evaluation, and other electronic support equipment for light reconnaissance and surveillance electronic systems
3345113101	4202	
3345113103	4204	IFF equipment
3345113105	4206	Proximity fuses

REFERENCE LIST — Continued

FORM **MA334B**

Product code	Item code	Item description
		SEARCH AND DETECTION, NAVIGATION AND GUIDANCE SYSTEMS AND EQUIPMENT — Continued (<i>Report value only</i>)
		Radar systems and equipment
		Search, detection, and acquisition radar systems and equipment (BMEWS, airborne and other early warning radar, air traffic control radar, air defense and fighter control radar, ship radar, harbor control radar, meteorological radar, etc.)
3345113207	4210	Airborne and missile/space radar
3345113209	4214	Ship (marine) radar
3345113211	4218	Ground radar
		Tracking radar systems and equipment (fire control, bombing, bombing-navigational radar, aircraft and missile tracking radar, etc.)
3345113313	4222	Airborne and missile/space radar
3345113315	4226	Ship (marine) radar
3345113317	4230	Ground radar
		Instrumentation radar systems and equipment (altimeters, highway speed control radar, missile and space satellite tracing range radar, GCA and other precision approach radar, etc.)
3345113319	4234	Airborne, missile/space and ship (marine) radar
3345113321	4238	Ground radar
3345113323	4242	Electronic checkout, monitoring, evaluation, and other electronic support equipment for radar systems
		Sonar search, detection, tracing, and communication systems and equipment, including ASW (sonar telephone, communication equipment, depth finding, fire control, fusing, guidance, hydrophones, mapping, sonabuys, navigation, sonar fish finders, sonar range instrumentation, and other)
3345113425	4246	Surface ship applications (destroyers, destroyer escorts, etc.)
3345113427	4248	Submarine applications
3345113429	4250	Airborne
3345113431	4254	Electronic checkout, monitoring, evaluation, and other electronic support equipment for sonar systems and submerged fixed systems
3345113433	4258	Specialized command and control data processing and display equipment sold separately from complete systems
3345113434	4259	Search, detection, identification, and tracking laser systems and equipment
3345113435	4260	Search, detection, identification, and tracking systems and equipment, n.e.c.
		Electronic warfare systems and equipment
		Countermeasures equipment
3345113437	4272	Jamming equipment, communications and radar
3345113439	4274	Underwater countermeasures equipment

REFERENCE LIST — Continued

FORM **MA334B**

Product code	Item code	Item description
		SEARCH AND DETECTION, NAVIGATION AND GUIDANCE SYSTEMS AND EQUIPMENT — Continued (<i>Report value only</i>)
		Electronic warfare systems and equipment — Continued Countermeasures equipment — Continued
3345113441	4278	Other active countermeasure equipment (excluding passive materials such as "chaff," "window," "needles," "rope," etc.) Penetration aids Decoys Repeaters Simulators Other
3345113443	4282	Specialized electronic and communication intelligence equipment (ELINT and COMINT equipment) n.e.c. Specially designed DF equipment Signal reduction and processing equipment Signal analyzers and display equipment Other Missile and space vehicle systems equipment (beam riders, command guidance, inertial systems, infrared homing systems, radar systems, stellar trackers, television systems, combination systems, etc.)
3345113545	4312	Missile-borne and space-vehicle-borne equipment
3345113547	4322	Nonmissile and space vehicle guidance equipment (ground, ship, or airborne command guidance systems, etc.)
3345113549	4332	Electronic checkout, launching, and other missile and space vehicle support systems (ground, ship, and air)
		Navigation systems and equipment (NAV AIDS) for aircraft, ship, and ground navigation (autopilots, beacons, transponders, collision warning devices, DECCA, DME, ILS, Doppler navigation systems, inertial navigation systems, optical/laser LORAN, radio compasses and direction finders, SHORAN, TACAN, VOR, VORTAC equipment, etc.)
3345113651	4342	Airborne navigational systems Radio navigation receivers and displays (including omni, radio magnetic, glide slope/localizer, DME, etc.)
3345113653	4344	Airborne integrated data systems/flight recorders
3345113655	4346	Distance measuring equipment (DME)
3345113657	4348	Flight directors/situation display
3345113659	4360	Heads-up display (HUD) systems
3345113661	4362	Inertial navigation systems
3345113663	4364	Proximity warning/collision avoidance equipment
3345113665	4366	Complete automatic pilots (both gyroscopic and non-gyroscopic)
3345113667	4368	Other airborne navigational systems

REFERENCE LIST — Continued

FORM **MA334B**

Product code	Item code	Item description
		SEARCH AND DETECTION, NAVIGATION AND GUIDANCE SYSTEMS AND EQUIPMENT — Continued (<i>Report value only</i>)
		Navigation systems and equipment (NAV AIDS) for aircraft, ship, and ground navigation (autopilots, beacons, transponders, collision warning devices, DECCA, DME, ILS, Doppler navigation systems, inertial navigation systems, optical/laser LORAN, radio compasses and direction finders, SHORAN, TACAN, VOR, VORTAC equipment, etc.) — Continued
3345113669	4372	Surface (ship and ground) navigational systems
3345113671	4374	Underwater navigational systems
3345113673	4382	Electronic checkout, monitoring, evaluation, and other electronic support equipment for navigational systems and equipment
XXX	4399	Total search and detection, navigation and guidance systems and equipment (Sum of item codes 4202–4382)
		AERONAUTICAL, NAUTICAL, AND NAVIGATIONAL INSTRUMENTS, EXCEPT AIRCRAFT ENGINE INSTRUMENTS
		(<i>Report value only</i>)
		<i>Report all navigation systems for aircraft, ship, and ground navigation in product class 3345113, pages 4–7. Report all instruments shipped separately below.</i>
		Flight and navigation sensors, transmitters, and displays
3345111101	4420	Compasses (all types)
3345111103	4430	Altimeters (except radio and radar altimeters)
3345111105	4435	Airspeed indicators (including machmeters and air data computers)
3345111107	4440	Acceleration indicators and systems components (<i>Report quantity in number of units</i>)
3345111109	4445	Rate-of-climb indicator (<i>Report quantity in number of units</i>)
3345111111	4450	Angle-of-attack indicators (<i>Report quantity in number of units</i>)
3345111113	4460	Artificial horizon flight instruments (<i>Report quantity in number of units</i>)
3345111115	4465	Other aerospace and navigational instruments — <i>Please specify</i>
		Gyroscopes sold separately
3345111217	4470	Vertical (<i>Report quantity in number of units</i>)
3345111219	4475	Directional (<i>Report quantity in number of units</i>)
3345111221	4480	Free, torqued and untorqued
3345111223	4485	Rate, inertial grade
3345111225	4490	Rate, noninertial grade
		Airframe equipment instruments
3345111227	4494	Position indicators (mechanical, as for landing gear, cowl flaps, stabilizers, etc.)
3345111229	4496	Hydraulic system (both electrical and mechanical measuring means, as for liquid level and temperature and pressure indicators)
3345111231	4498	Cabin environmental measuring and control instruments (air-conditioning and heating, cabin pressure, oxygen, etc.)
3345111233	4516	Other aerospace flight instruments (not specified above), including parts sold separately — <i>Please specify</i>
3345111335	4517	Nautical instruments (all types, including temperature, speed, pitch and roll instruments, and system components, etc.) — <i>Please specify (Report quantity in number of units)</i>

REFERENCE LIST — Continued

FORM MA334B		
Product code	Item code	Item description
		AERONAUTICAL, NAUTICAL, AND NAVIGATIONAL INSTRUMENTS, EXCEPT AIRCRAFT ENGINE INSTRUMENTS — Continued <i>(Report value only)</i> <i>Report all navigation systems for aircraft, ship, and ground navigation in product class 3345113, pages 4–7. Report all instruments shipped separately below.</i>
3345111437	4518	Parts and components for aeronautical, nautical, and navigational instruments, except aircraft engine instruments, sold separately
XXX	4519	Total Aeronautical, Nautical, and Navigational Instruments, except aircraft engine instruments <i>(Sum of item codes 4420–4518)</i>
		LABORATORY APPARATUS <i>(Report scientific instruments in product class 3345160, pages 22–24)</i> <i>(Report quantity in number of units)</i>
3391110112	4521	Laboratory balances and scales <i>(Report quantity and value)</i>
3391110115	4523	Laboratory furnaces and ovens
3391110118	4525	Laboratory centrifuges <i>(Report quantity and value)</i>
3391110121	4527	Laboratory distillation apparatus and rectifying apparatus
3391110125	4531	Laboratory sterilizers and autoclaves
3391110129	4533	Laboratory burners and hot plates
3391110133	4536	Laboratory granulators, mills, and other particle size reduction apparatus
3391110135	4537	Laboratory drying and evaporation apparatus
3391110231	4539	Laboratory furniture, including cabinets, cases, benches, tables, stools, and reagent shelves, etc. (exclude drafting tables)
3391110233	4540	Parts and components for laboratory furniture, sold separately
3391110137	4541	Laboratory blenders, mixers, shakers, dispensers, fraction collectors, and other liquid sample preparation apparatus
3391110139	4542	Laboratory incubators <i>(Report quantity and value)</i>
3391110141	4543	Environmental test chambers <i>(Report quantity and value)</i>
3391110143	4544	Laboratory freezers <i>(Report quantity and value)</i>
3391110151	4547	All other laboratory apparatus, n.e.c. (excluding analytical instruments)
3391110155	4548	Components, parts and accessories for laboratory apparatus (sold separately)
XXX	4549	Total Laboratory Apparatus <i>(Sum of item codes 4521–4548)</i> <i>(Report value only)</i>
		SURVEYING AND DRAFTING INSTRUMENTS AND ASSOCIATED EQUIPMENT <i>(Report value of shipments only)</i>
3345199101	4551	Surveying instruments, including alidades, transits, plumb bobs, sextants, theodolites, surveyors, compasses, surveyors levels, tapes, etc.

Product code	Item code	Item description
		SURVEYING AND DRAFTING INSTRUMENTS AND ASSOCIATED EQUIPMENT — Continued <i>(Report value of shipments only)</i>
3345199103	4553	Parts and components for surveying instruments, sold separately
3345199105	4555	Drafting instruments and machines, manual and automatic, drafting tables, plotting instruments, slide rules, T-squares, drafting templates, rules, etc.
3345199107	4556	Parts and components for drafting instruments and machines, sold separately
3345199108	4557	Surveying and drafting laser systems and equipment
3345199109	4559	Photogrammetric and geodetic equipment, excluding cameras
3345199111	4561	Parts and components for photogrammetric and geodetic equipment, sold separately
XXX	4569	Total Surveying and Drafting Instruments and Associated Equipment <i>(Sum of item codes 4551–4561)</i>
		CONTROLS FOR MONITORING RESIDENTIAL AND COMMERCIAL ENVIRONMENTS AND APPLIANCE REGULATING CONTROLS <i>(Report quantity in number of units)</i> Automatic controls of the type principally used as components of air conditioning, refrigeration, and comfort heating (including pneumatic controls)
3345120102	4571	Temperature responsive (thermostats)
3345120105	4573	Pressure responsive (pressurestats)
3345120107	4574	Hydronic responsive
3345120109	4576	Humidity responsive (humidistats)
3345120111	4578	Light responsive
3345120113	4583	Liquid level
3345120115	4586	Igniters
3345120117	4588	Inherent motor protectors
3345120219	4589	Microprocessor-based load programmers for buildings energy control
3345120221	4591	Computerized energy control systems for buildings
3345120222	4593	Lighting controls, including occupancy and motion sensors, lighting control panels, dimming control systems, timing devices, etc.
3345120223	4597	Other <i>(Report value only)</i>

REFERENCE LIST — Continued

FORM MA334B		
Product code	Item code	Item description
		CONTROLS FOR MONITORING RESIDENTIAL AND COMMERCIAL ENVIRONMENTS AND APPLIANCE REGULATING CONTROLS — Continued Controls for major appliances such as domestic laundry and cooking appliances, refrigerators and freezers, vending machines, air conditioners, etc. 3345120225 4599 Temperature responsive 3345120227 4608 All other controls for appliances 3345120229 4609 Parts and components for controls for monitoring residential and commercial environments and appliance regulating controls (sold separately) (Report value only) XXX 4611 Total Controls for Monitoring Residential and Commercial Environments and Appliance Regulating Controls (Sum of item codes 4571–4609) (Report value only)
		PROCESS CONTROL INSTRUMENTS <i>(Report quantity in number of units)</i> <i>Include only those industrial type instruments and related products primarily designed to measure, transmit, display and/or control process variables in manufacturing, mining, energy conversion and public utilities</i> General purpose control system instruments and related equipment — These instruments (commonly called receiver-type) do not measure the process variable directly, but operate from standardized transmission signals (Electrical types — a.c. or d.c. milliampere, millivolt or telemetering signals; Pneumatic types — 3 to 15 and 3 to 27 p.s.i. signals) Electronic systems — unified architecture Include all system-type control, display and computing instruments actuated from standardized electrical transmission signals in which control and signal conditioning are integral with the display/operator interface 3345130101 4612 Controllers (recording, indicating, or blind) 3345130103 4613 Recorders, with or without self-contained set-point stations 3345130105 4614 Indicators, with or without self-contained set-point stations 3345130107 4615 Auxiliary stations and analog computing devices associated with the above (Include manual loaders, auto-to-manual stations, ratio stations, adders, multipliers, integrators, etc.) Electronic systems — non-unified architecture 3345130109 4617 Include all system-type instruments and related equipment actuated from standardized electrical transmission signals in which control and signal conditioning are separated from the display/operator interface. Equipment should include single loop and multi-loop controllers, dedicated operator stations, shared CRT-based operator work stations, process I/O equipment, communication equipment and other related miscellaneous equipment such as power supplies, racks, panels, cables, console furniture, printers, tape drives, mounting hardware, shelves, nests, calibrators, testors, etc. Do not include multi-function process computers to be reported in 3345130111. <i>(Report value only)</i>

REFERENCE LIST — Continued

FORM MA334B		
Product code	Item code	Item description
		PROCESS CONTROL INSTRUMENTS — Continued General purpose control system instruments and related equipment — Continued (Report quantity of shipments in number of units) Industrial multi-function process computers <div> <div>3345130111</div> <div>4618</div> <div> Include the hardware and standard software of the CPU and all peripheral equipment of the computers that provide centralized processing intelligence for at least two or more of the following functions: data manipulation and reporting, supervisory control and data acquisition, calculations using control algorithms, data base management, use of a high-level programming language and operator interface. <i>(Report value only)</i> Pneumatic systems <i>Include all system-type control, display and computing instruments actuated from standardized pneumatic transmission signals</i> </div> </div> <div> <div>3345130113</div> <div>4620</div> <div>Controllers (recording, indicating, or blind)</div> </div> <div> <div>3345130116</div> <div>4626</div> <div>Recorders and indicators, with or without self-contained set-point stations</div> </div> <div> <div>3345130119</div> <div>4635</div> <div>Auxiliary stations and analog computing devices associated with the above (Include manual loaders, auto-to-manual stations, ratio stations, adders, multipliers, integrators, etc.)</div> </div> <div> <div>3345130121</div> <div>4640</div> <div>Receiver-type gauges, analog and digital</div> </div> <div> <div>3345130123</div> <div>4645</div> <div> Annunciators, industrial; electro-mechanical and solid-state types Temperature measuring instruments <i>(Exclude general purpose receiver-type instruments which should be reported in the General Purpose category on pages 10-11)</i> Electrical and electronic measuring types (thermocouple, resistance temperature detector, radiation, optical, thermistor, and other electrical sensors) </div> </div> <div> <div>3345130225</div> <div>4650</div> <div>Direct-deflecting types (controllers for all types of electrical temperature sensors)</div> </div> <div> <div>3345130227</div> <div>4655</div> <div>Direct-deflecting types (indicators and recorders for all types of electrical temperature sensors)</div> </div> <div> <div>3345130231</div> <div>4665</div> <div>Electromechanical self-balancing types (indicators, recorders, and integrators for all types of electrical temperature sensors)</div> </div> <div> <div>3345130233</div> <div>4670</div> <div>Electronic controllers for all types of electrical temperature sensors</div> </div> <div> <div>3345130235</div> <div>4675</div> <div>Digital indicators for all types of electrical temperature sensors <i>(Exclude data loggers)</i> </div> <div> <div>3345130237</div> <div>4681</div> <div>Transmitters, producing standardized electric or pneumatic analog transmission signals for all types of electrical temperature sensors</div> </div> <div> <div>3345130239</div> <div>4682</div> <div> Electric Pneumatic </div> </div> </div>

REFERENCE LIST — Continued

FORM **MA334B**

Product code	Item code	Item description
		PROCESS CONTROL INSTRUMENTS — Continued
		Temperature measuring instruments — Continued <i>(Exclude general purpose receiver-type instruments which should be reported in the General Purpose category on pages 10-11)</i>
		Electrical and electronic measuring types (thermocouple, resistance temperature detector, radiation, optical, thermistor, and other electrical sensors) — Continued
		Mechanical measuring types, filled systems (liquid filled, vapor pressure, gas filled, and mercury filled types)
3345130241	4685	Indicating or recording controllers
3345130243	4690	Recorders, non-control
3345130245	4695	Indicators only <i>(Exclude indoor-outdoor and other household or appliance type thermometers)</i>
3345130247	4700	Transmitters producing standardized electric or pneumatic analog transmission signals
		Primary temperature sensors <i>(Exclude aircraft types) (Report value only)</i>
3345130249	4705	Thermocouples and thermocouple lead wire <i>(Report value only)</i>
3345130251	4710	All other types (resistance temperature detectors, radiation and optical sensors <i>(Report value only)</i>)
		Pressure (gauge, absolute, vacuum) and draft measuring instruments <i>(Exclude general purpose receiver-type instruments which should be reported in the General Purpose category on pages 10-11)</i>
3345130253	4715	Indicating or recording controllers
3345130255	4720	Recorders, non-control
		Indicators only <i>(Exclude receiver type gauges)</i>
3345130257	4726	3-inch diameter and over
3345130259	4727	Under 3-inch diameter
		Transmitters producing standardized analog transmission signals
3345130261	4728	Transmitters producing standardized electronic analog transmission signals
3345130263	4729	Transmitters producing standardized pneumatic analog transmission signals

REFERENCE LIST — Continued

FORM **MA334B**

Product code	Item code	Item description
		PROCESS CONTROL INSTRUMENTS — Continued (Report quantity in number of units)
		Flow and liquid level measuring instruments (Exclude general purpose receiver-type instruments which should be reported in the General Purpose category on pages 10-11)
		Differential pressure types
3345130265	4735	Indicating or recording controllers
3345130267	4740	Recorders, non-control and indicators, non-control
		Transmitters producing standardized analog transmission signals
3345130269	4746	Transmitters producing standardized electronic analog transmission signals
3345130271	4748	Transmitters producing standardized pneumatic analog transmission signals
3345130273	4749	Primary pressure sensors (load cells, strain gauges, etc.)
3345130275	4750	Primary flow elements (Include orifice plates, venturi tubes, flow tubes, flow nozzles, pitot tubes, etc.)
		Electromagnetic Flowmeters
3345130277	4751	Primary device (magnetic flow tube)
3345130279	4753	Secondary device (magnetic transmitter, recorder, indicator or controller which receives signal directly from primary device)
3345130281	4756	Capacitance, ultrasonic, and other electronic types (Include magnetic resonance, vortex-precession, and vortex-shedding type elements)
3345130283	4765	Variable area-controlling, recording, indicating, and transmitting instruments and associated primary flow elements
3345130285	4770	Float and displacement — controlling, recording, indicating, and transmitting instruments and associated primary flow elements
3345130287	4772	Turbine and propeller — controlling, recording, indicating, and transmitting instruments and associated primary flow elements
3345130289	4777	Mass-flow, i.e. — controlling, thermal-controlling, recording, indicating, and transmitting instruments and associated primary flow elements
3345130291	4779	Other types — controlling, recording, indicating, and transmitting instruments and associated primary flow elements
3345130293	4780	Humidity instruments — controlling, recording, indicating and transmitting, and associated primary humidity elements (Exclude home and general purpose type)

REFERENCE LIST — Continued

FORM **MA334B**

Product code	Item code	Item description
		PROCESS CONTROL INSTRUMENTS — Continued (Report quantity in number of units)
		Continuous process instruments for on-stream gas and liquid analysis (Include indicators, recorders, controllers, and analysis electrodes and cells. Report laboratory analysis types in product class 3345160 on page 24.
3345130295	4785	Chromatographic analyzers
3345130297	4790	Infrared analyzers
3345130299	4795	Oxygen analyzers
334513021A	4800	Other gas analyzers
334513021C	4805	pH analyzers
334513021E	4810	Other liquid analyzers
		Instruments for all process variables not listed above (speed, weight, position, sequence, density, specific gravity, mechanical load, electrical load, millivolts)
		Electrical and electronic measuring types
334513011G	4812	Direct-deflecting type controllers, indicators, and recorders
334513021L	4835	Digital indicators
334513021M	4840	Transmitters producing standardized electric or pneumatic analog transmission signals
		Mechanical measuring types
334513021P	4844	Indicating or recording controllers and recorders, non-control
334513021R	4855	Indicators only
334513021T	4860	Transmitters, producing standardized electric or pneumatic analog transmission signals
		All other industrial process instruments (do not report any instruments here which should be reported on pages 10-11 in the General Purpose category or under a specific process variable such as temperature, pressure, flow, etc.) (Report value only)
334513022A	4881	Other temperature instruments
334513022C	4883	Other flow and liquid level instruments
334513022E	4885	Other continuous process instruments
334513022G	4887	Other industrial type instruments
		Parts, supplies, accessories, other primary sensors, n.e.c., panelboards, and other equipment associated with process control instrumentation
334513032J	4891	Primarily designed for temperature instruments
334513032L	4893	Primarily designed for flow and liquid level instruments
334513032N	4895	Primarily designed for continuous process instruments
334513032P	4897	Primarily designed for industrial type instruments
XXX	4899	Total Process Control Instruments (Sum of item codes 4612–4897)

REFERENCE LIST — Continued

FORM **MA334B**

Product code	Item code	Item description
INTEGRATING AND TOTALIZING METERS FOR GAS AND LIQUIDS <i>(Report quantity in number of units)</i>		
Gas meters, consumption registering		
		Diaphragm type: positive displacements; aluminum, iron, and tin case
3345141101	5390	Residential size (up to 400 cu. ft./hr. of 0.64 specific gravity gas, at 0.5 inches water drop)
3345141103	5395	Other sizes, including commercial and industrial
3345141105	5405	Turbine type (all sizes)
3345141107	5407	Other gas meters, consumption registering
Liquid meters, positive displacement with registers and counters		
		Water meters, consumption registering
3345141109	5411	Small meters, up to and including 1 inch
3345141111	5412	Intermediate meters, over 1 inch up to and including 2 inch
3345141113	5413	Large meters, over 2 inch
3345141115	5415	Liquid fuel dispensing meters (Exclude service station dispensing pumps)
3345141117	5420	Other liquid meters: industrial bulk plants, pipeline, batching, treatment facilities
3345141119	5425	Parts, components, and accessories for gas and liquid meters (<i>sold separately</i>) (<i>Report value only</i>)
XXX	5429	Total Integrating and Totalizing Meters for Gas and Liquids (<i>Sum of item codes 5390–5425</i>) (<i>Report value only</i>)
COUNTING DEVICES (Excluding motor vehicle instruments) <i>(Report quantity in number of units)</i>		
3345143101	5504	Mechanical input
3345143103	5506	Electrical input
3345143105	5508	Electronic input
3345143107	5523	All other counting devices not specified above, including toll meters, fare collection equipment (systems), parking lot systems, taximeters, parking meters, etc. (<i>Report value only</i>)
3345143109	5525	Components and parts for counting devices (<i>sold separately</i>) (<i>Report value only</i>)
XXX	5529	Total counting devices (<i>Sum of item codes 5504–5525</i>) (<i>Report value only</i>)

REFERENCE LIST — Continued

FORM MA334B		
Product code	Item code	Item description
		MOTOR VEHICLE INSTRUMENTS <i>(Report value only)</i>
3345145101	5531	Speedometers (Speedometers that include odometers are classified as speedometers)
3345145103	5533	Tachometers
3345145105	5535	Odometers (Speedometers that include odometers are classified as speedometers)
3345145107	5537	Fuel level gauges
3345145109	5541	Water temperature gauges
3345145111	5543	Ammeters
3345145113	5545	Oil pressure gauges
3345145115	5546	Instrument panels, including cluster modules
3345145117	5547	Other motor vehicle instruments
XXX	5559	Total Motor Vehicle Instruments (Sum of item codes 5531–5547)
		INTEGRATING INSTRUMENTS, ELECTRICAL <i>(Report value only)</i> <i>(Report electrical power measuring equipment under product code 3345153115)</i>
		A.c. watt-hour meters Single phase <i>(Report quantity in number of units)</i> Polyphase <i>(Report quantity in number of units)</i>
3345151101	5610	
3345151103	5615	
3345151105	5621	Demand meters, (kW and kVA), combined watt-hour and demand meters (single phase and polyphase), and combined watt-hour and time switch meters
3345151107	5625	Other electrical integrating meters (including d.c. watt-hour meters, ampere-hour meters, and other miscellaneous integrating instruments not included in the above classifications)
3345151109	5631	Parts and accessories for electric integrating meters including meter mountings and registers) sold separately
XXX	5639	Total Integrating Instruments, Electrical (Sum of item codes 5610–5631)
		TEST EQUIPMENT FOR TESTING ELECTRICAL RADIO AND COMMUNICATION CIRCUITS, AND MOTORS <i>(Report value of shipments only)</i>
		Voltage, current, and resistance measuring equipment (except multimeters) Electronic Digital Analog
3345153101	5701	
3345153103	5703	
3345153105	5705	Electrical <i>(Do NOT report panel meters; they should be reported elsewhere on this form under code 3345155101 on page 19.)</i>
		Multimeters Electronic, digital and analog Electrical
3345153107	5707	
3345153109	5710	
		Power and energy measuring equipment Electronic, digital and analog Electrical power measuring equipment <i>(Report electrical integrating instruments, sold separately, under the appropriate code(s) beginning with 3345151.)</i>
3345153114	5714	
3345153115	5717	

REFERENCE LIST — Continued

FORM **MA334B**

Product code	Item code	Item description
		TEST EQUIPMENT FOR TESTING ELECTRICAL RADIO AND COMMUNICATION CIRCUITS, AND MOTORS — Continued (<i>Report value of shipments only</i>)
3345153118	5723	Frequency counters, timers, and other frequency and time measuring equipment, (<i>excluding standards</i>)
3345153126	5729	Waveform measuring and/or analyzing equipment, including oscilloscopes and spectrum analyzers
		Signal generating equipment
3345153131	5737	Audio
3345153133	5741	RF (over 20 kc to 890 megacycles)
3345153135	5743	Microwave (890 megacycles and above)
		Field strength and intensity measuring equipment, including RFI measuring equipment
3345153137	5745	Electronic
3345153139	5747	Electrical field measuring equipment
		Impedance and standing wave ratio measuring equipment (transfer function measuring equipment)
3345153143	5751	Electronic impedance and related measuring equipment
		Automatic test and measuring equipment
3345153149	5759	Combination and/or group test sets Component part test sets
3345153151	5761	Electron tube test equipment Semiconductor component test equipment
3345153153	5762	Memory
3345153155	5763	Linear
3345153157	5764	Microprocessor
3345153159	5765	Other semiconductor component test equipment
3345153161	5766	Circuit board loaded test equipment (<i>Report bare board testers under product code 3345153077, "Continuity testers."</i>)
3345153163	5767	Other component part test sets and equipment
3345153165	5769	Equipment and subassembly test equipment, n.e.c. (disc drive testers, power supply testers, etc.)
3345153168	5775	Standards and calibration equipment for test measuring equipment, including laboratory types (metered bench-top, rack-mountable, or plug-in equipment)

REFERENCE LIST — Continued

FORM MA334B		
Product code	Item code	Item description
		TEST EQUIPMENT FOR TESTING ELECTRICAL RADIO AND COMMUNICATION CIRCUITS, AND MOTORS — Continued <i>(Report value of shipments only)</i>
		Analyzers for testing characteristics of internal-combustion engines <i>(Exclude aircraft)</i>
3345153171	5776	Portable
3345153173	5777	Other
		Communications test equipment, not elsewhere classified
3345153175	5782	Network analyzers
3345153177	5783	Cable backplane and other continuity testers
3345153179	5784	Fiber optics test equipment (OTDR, optical S/N meters, etc.)
3345153181	5785	Other communications test, monitoring, and control equipment (except microwave)
3345153183	5786	Microwave test equipment, n.e.c., (1300 MHZ and above)
		Logic test, development, and analysis equipment
3345153185	5787	Logic analyzers, and similar logic state, timing, and signature analyzers
3345153187	5789	Microprocessor development systems
3345153189	5791	Pulse, function, and data generators and similar metered frequency synthesizers
3345153191	5793	Other field service test and measurement equipment, logic probes, clips, pulsers
3345153193	5811	Other measuring and checking instruments for testing electrical, radio and communication circuits, and motors
3345153195	5814	Other analyzing instruments for checking electrical quantities
3345153197	5849	Parts and components for test equipment for testing electrical, radio and communication circuits, and motors (sold separately)
XXX	5899	Total Test Equipment for Testing Electrical, Radio and Communication Circuits and Motors. (Sum of item codes 5701–5849)
		INSTRUMENTS TO MEASURE ELECTRICITY
		<i>(Report quantity in number of units)</i>
		<i>Do not report under 3345155 instruments for measuring, indicating, recording, or controlling process variables such as temperature, pressure, flow, liquid level, humidity, gas and liquid concentrations, etc. (Report such instruments under the appropriate product codes beginning with 3345130.)</i>
		Electrical indicating instruments
		<i>(Include both digital types and those where a pointer is made to move over a calibrated scale, such movement being effected by the action of the electrical current and/or voltage.)</i>
		Panel type instruments
		<i>(Include all aircraft types and all miniaturized instruments + or - 3% and rectifier instruments, which can be enclosed in a case suitable for mounting on a panel and are an end product. Exclude all instruments for use on motor vehicles which are capable of accuracies of + or - 2% of full scale indication.)</i>

REFERENCE LIST — Continued

FORM MA334B		
Product code	Item code	Item description
INSTRUMENTS TO MEASURE ELECTRICITY — Continued <i>(Report quantity in number of units)</i> Electrical indicating instruments — Continued Panel type instruments — Continued		
3345155101	6001	Digital panel meters (DPM) between 0.05% and 1%, + or - 1 digit accuracy <i>(excluding precision DVM's and electronic counters)</i>
3345155103	6002	Analog solid state panel meters (generally of + or - 2% accuracy) with LED LCD, or neon gas discharge display
3345155105	6003	Panel types other than ruggedized or sealed (generally of 2% accuracy) A.c. (including moving iron vane and dynamometer types)
3345155107	6005	D.c. (including rectifier and self-contained thermocouple types)
3345155109	6007	Panel types ruggedized or sealed (generally of 2% accuracy)
3345155113	6015	All other panel type instruments, including ammeters and voltmeters for motor vehicles
334515516	6019	Switchboard instruments which are generally of 1% accuracy (including a.c. and d.c.)
3345155119	6023	Elapsed time meters (with and without reset)
3345155121	6024	Portable instruments which are generally capable of accuracies within + or - 2% full scale indication, and can be enclosed in a case so that they can be moved and used at various locations, and which are an end product
3345155124	6036	Electrical recording instruments (portable and for panel mounting) including oscillographic and direct deflecting types. <i>(Do not include potentiometer and bridge self-balancing types which are to reported elsewhere on this form.)</i> Parts and accessories for indicating and recording instruments <i>(Report value only)</i>
3345155129	6047	Transducers for volts, amperes, watts, vars, frequency, temperature, and power factor
3345155133	6053	Other, including instrument shunts
XXX	6059	Total instruments to measure electricity <i>(Sum of item codes 6001–6053)</i> (Report value only)
AIRCRAFT ENGINE INSTRUMENTS, EXCEPT FLIGHT <div style="text-align: center;"><i>(Report value only)</i></div>		
3345191101	6101	Temperature sensors, transmitters, and displays
3345191103	6103	Pressure ratio sensors, displays, and controls

REFERENCE LIST — Continued

FORM MA334B		
Product code	Item code	Item description
		AIRCRAFT ENGINE INSTRUMENTS, EXCEPT FLIGHT — Continued (Report value only)
3345191105	6105	Pressure and vacuum sensors, transmitters, and displays
3345191107	6107	Fuel and oil flow rate sensors, transmitters, and displays, including mixture controls
3345191109	6111	Fuel and oil quantity sensors, transmitters, and displays, including densitometers
3345191111	6113	Tachometer generators and indicators
3345191113	6115	All other not specified above
3345191115	6119	Parts and components for aircraft engine instruments, except flight (sold separately)
XXX	6129	Total Aircraft Engine Instruments, Except Flight (Sum of item codes 6101–6119)
		PHYSICAL PROPERTIES TESTING AND INSPECTION EQUIPMENT AND KINEMATIC TESTING AND MEASURING EQUIPMENT (Exclude X-ray; also exclude similar nuclear instruments for industrial purposes which should be reported under product codes 3345195119–127. Exclude analytical instruments, which should be reported under product codes 3345160101–167.)
		<i>(Report value only)</i>
		Physical properties testing equipment including hardness, tensile, stress, strain, abrasion, strength, torsion, wear, and similar testing equipment (including components and parts sold separately).
3345193101	6201	For testing of metals
3345193103	6203	Other
3345193105	6205	Parts for physical properties testing equipment (sold separately)
		Physical properties inspection equipment, including flaw detection, thickness measuring, and similar inspection equipment. (Include components and parts sold separately)
3345193107	6207	For testing of metals
3345193109	6210	Measuring and checking flow of fluids
3345193111	6212	Other
3345193113	6214	Parts for physical properties inspection equipment (sold separately)
3345193115	6217	Kinematic testing and measuring equipment (including vibration, acceleration, and other motion testing equipment)
3345193117	6218	Parts for kinematic testing and measuring equipment (sold separately)
XXX	6229	Total Physical Properties Testing and Inspection Equipment and Kinematic Testing and Measuring Equipment (Sum of item codes 6201–6218)

REFERENCE LIST — Continued

FORM **MA334B**

Product code	Item code	Item description
		COMMERCIAL, GEOPHYSICAL, METEOROLOGICAL, AND GENERAL PURPOSE INSTRUMENTS
		<i>(Report quantity of shipments in number of units)</i>
3345197101	6601	Barometers and barographs, aneroid and mercurial types, including recorders, wall, pendant, meteorological, hygro-thermographs, barometer-thermometer-humidity combinations <i>(Report value only)</i>
3345197103	6605	Hydrometers, glass, all types, including thermo-hydrometers
3345197105	6607	Liquid-in-glass thermometers Engraved (etched) stem, thermoregulators, deep-sea reversing, laboratory, encased glass, ASTM standards, pocket case, max-min registering, except clinical thermometers <i>(Report value only)</i>
3345197107	6609	Threaded and flanged types, fixed and adjustable angle, in-line and duct installations, for process, food, air conditioning, and refrigeration installations
3345197109	6611	Household and commercial thermometers such as wall, outdoor, domestic science, cupcase, filled systems, indoor-outdoor (exclude medical thermometers).
3345197111	6615	Bimetal thermometers Threaded and flanged types, for pipeline and duct installations, including general and pocket test
3345197113	6617	Domestic science, commercial general test, indoor, outdoor, desk models, oven, refrigerator
3345197115	6619	Humidity indicating and recording instruments such as bi-hygroscopic and hygroscopic element, indicators, psychrometers, wet and dry bulb, hygrographs, indicating hygrometers <i>(Exclude process type of humidistats)</i> <i>(Report value only)</i>
3345197117	6625	Other thermometers (infrared, meteorological, commercial and industrial) <i>(Report value only)</i>
3345197123	6630	Meteorological electronics equipment and radio astronomy equipment (automatic weather stations and weather tracking equipment, ceilometers, transitometers, space satellite meteorological systems, and specilized meteorological telemetering equipment) <i>(Report value only)</i>
3345197125	6635	Other meteorological instruments, including speed and direction instruments, rain gauges, thermographs, and parts (sold separately) <i>(Report value only)</i>
3345197127	6640	Seismic instruments <i>(Report value only)</i>
3345197129	6645	All other geophysical instruments and equipment <i>(Report value only)</i>
3345197130	6647	Commercial, geophysical, and meteorological laser systems and equipment
3345197131	6650	Other commercial and industrial instruments, including compasses, altimeters, test equipment for hydraulic and pneumatic systems and controls, environmental gas detectors, air sampling instruments, dynamometers, etc, (sold separately) <i>(Report value only)</i>

REFERENCE LIST — Continued

FORM MA334B		
Product code	Item code	Item description
3345197133	6655	COMMERCIAL, GEOPHYSICAL, METEOROLOGICAL, AND GENERAL PURPOSE INSTRUMENTS — Continued <i>(Report quantity of shipments in number of units)</i>
XXX	6659	Parts and accessories, for meteorological and commercial and industrial instruments <i>(Report value only)</i>
		Total Commercial, Geophysical, Meteorological, and General Purpose Instruments <i>(Sum of item codes 6601–6655) (Report value only)</i>
NUCLEAR RADIATION DETECTION AND MONITORING INSTRUMENTS		
<i>(Report quantity of shipments in number of units)</i>		
3345195101	7001	Radiation detecting elements (including ion chambers) (not included in instruments or systems listed elsewhere in this report)
3345195103	7003	Solid state detectors
3345195105	7005	Nuclear monitoring instruments <i>(Include environmental, personal dosimetry, and medical monitors, both stationary and portable type)</i>
3345195107	7011	Sample and flow counting systems, manual and automatic <i>(Report value only)</i>
3345195109	7013	Scalers
3345195114	7016	Pulse analyzer (including single and multichannel, and nuclear spectrometers)
3345195117	7023	Count rate meters
3345195119	7025	Measurement and control devices using Beta, Gamma, or neutron gauge technology <i>(Report value only)</i>
3345195121	7031	Nuclear power supplies <i>(Report value only)</i>
3345195123	7033	Neutron and photon activation analysis systems <i>(Report value only)</i>
3345195125	7035	Nuclear instrument modules, not elsewhere classified <i>(Report value only)</i>
3345195127	7037	Other nuclear radiation detection and monitoring instruments <i>(Report value only)</i>
3345195129	7039	Parts and components for nuclear radiation detection and monitoring instruments (sold separately) <i>(Report value only)</i>
XXX	7049	Total Nuclear Radiation Detection and Monitoring Instruments <i>(Sum of item codes 7001-7039) (Report value only)</i>

REFERENCE LIST — Continued

FORM **MA334B**

Product code	Item code	Item description
		ANALYTICAL AND SCIENTIFIC INSTRUMENTS (EXCEPT OPTICAL) (Report industrial continuous process types in product class 3345130)
		(Report quantity in number of units)
		Electrochemical instruments (Report value only for item codes 8001-8022)
3345160101	8001	pH electrodes and meters
3345160103	8003	Ion selective electrodes and meters
3345160107	8005	Electrophoresis instruments
3345160109	8022	Other, except process type (include photometers)
3345160112	8024	Chromatographic instruments (including gas, liquid, paper, gel and thin layer)
		Spectrophotometric instruments (Report value only for items 8031–8130)
3345160117	8031	Atomic absorption
3345160119	8034	Optical emission, including spark, arc, and glow, spectrographs, all other, except ICP
3345160121	8036	Optical emission, including laser excited source (including laser microprobe source emission, laser source Raman, and laser microprobe source Raman spectrometers)
3345160123	8037	Optical emission with inductively coupled plasma, ICP
3345160125	8121	Infrared (including Fourier transfer methods)
3345160127	8123	Ultraviolet, visible and colorimeters
3345160129	8125	Fluorescent instruments, including fluorometers (except chemicals)
3345160131	8127	Color measuring devices
3345160133	8130	Other, including vacuum ultraviolet, Raman light scattering reflectors helium glow, and light measuring
3345160135	8133	Thermal analysis instruments (Report value only)
		Thermogravimetric analyzers (THA)
		Differential thermal analyzers (DTA)
		Quantitative thermal analyzers (QTA)
3345160137	8135	Nuclear magnetic resonance spectrometers (Report medical NMR imaging equipment on Survey MA334R, Electromedical Equipment and Irradiation Equipment) (Report quantity of shipments in number of units)
		Electron paramagnetic spin types (EP)
		Other
3345160139	8137	Microscopes, scanning type, including electron and proton
3345160141	8138	Particle beam excitation instruments (Report quantity of shipments in number of units)
		Electron microprobe
		Ion microprobe
		Auger
		Secondary ion mass spectrometer (SIMS)
		Energy ion spectroscopy

REFERENCE LIST — Continued

FORM MA334B		
Product code	Item code	Item description
		ANALYTICAL AND SCIENTIFIC INSTRUMENTS (EXCEPT OPTICAL) — Continued <i>(Report industrial continuous process types in product class 3345130)</i>
3345160143	8139	Photon excitation analyzers <i>(Report quantity of shipments in number of units)</i> X-ray fluorescence - simultaneous X-ray diffraction Energy Dispersive Systems (EDS)
3345160145	8141	Mass spectroscopy instrumentation <i>(Report value only)</i> Clinical laboratory instrumentation (includes instruments used in the clinical laboratory for measuring, analyzing, and processing clinical specimens) <i>(Report quantity in number of units for item codes 8142–8152)</i>
3345160147	8142	Chemistry — measure and identify substances, e.g., metabolites, enzymes, and drugs
3345160149	8144	Hematology — measure and identify substances or cells contained in blood or substances influencing the development and clotting of blood, e.g., cell counting coagulation factors
3345160151	8146	Microbiology — enumerate or identify pathogenic organisms or measure their susceptibility to anti-microbial agents
3345160153	8149	Histology — process tissue and cells, e.g., tissue processors, cell stainers
3345160155	8150	Blood bank and immunology — process blood and specimens for testing; measure and identify, using immunoassay, substances in clinical specimens
3345160157	8152	Other clinical laboratory instrumentation (not specified above)
3345160159	8182	Organic elemental analysis instruments <i>(Report quantity of shipments in number of units)</i> Carbon Hydrogen Nitrogen Oxygen Sulphur
3345160161	8185	Amino acid, protein and/or peptide analyzers (including chromatographic type) <i>(Report quantity of shipments in number of units)</i>
3345160163	8186	Gas detectors <i>(Report quantity of shipments in number of units)</i>
3345160164	8188	Analytical and scientific laser systems and equipment
3345160165	8189	Other analytical and scientific instruments not elsewhere classified <i>(Report value only)</i> Molecular weight Monochrometers — analytical type Nephelometers — except meteorological Osmometers Particle size analyzers Photo-multipliers Surface area analyzers Turbidometers Breatholyzers

REFERENCE LIST — Continued

FORM MA334B		
Product code	Item code	Item description
3345160167	8196	ANALYTICAL AND SCIENTIFIC INSTRUMENTS (EXCEPT OPTICAL) — Continued Parts, components, and accessories for analytical and scientific instruments (sold separately), including photo tubes, thermal conductivity sensors, thermopiles, etc., which are not specifically provided for below in product class 3333143, optical instruments (<i>Report value only</i>)
XXX	8198	Total Analytical and Scientific Instruments (<i>Sum of item codes 8001–8196</i>) (<i>Report value only</i>)
		OPTICAL INSTRUMENTS (<i>Report value only</i>) Binoculars and astronomical instruments
3333143111	8211	Binoculars, prismatic and nonprismatic, terrestrial and celestial telescopes
3333143113	8213	Other astronomical instruments (excluding radio astronomy)
3333143115	8215	Parts and accessories (including mountings) for binoculars, optical telescopes and other astronomical equipment
		Other optical instruments and lenses
3333143231	8221	Optical test and inspection equipment including standard sources, modulators, optical comparators, interferometers (except optical microscopes)
3333143233	8223	Optical microscopes
		Optical components
3333143235	8225	Filters, including parts and accessories thereof
		Lenses, except ophthalmic focus lenses
3333143237	8231	Unmounted lenses
3333143242	8234	Mounted lenses, including photographic
3333143243	8239	Other (prisms, mirrors, etc.)
3333143247	8241	Parts and accessories for other optical microscopes
3333143249	8243	Parts and accessories for other optical instruments
3333143245	8245	Other optical instruments (including optical alignment and display instruments) excluding analytical instruments and binoculars and astronomical instruments listed above and sighting and fire control equipment
XXX	8259	Total Optical Instruments and Lenses (<i>Sum of item codes 8211–8245</i>)

REFERENCE LIST — Continued

FORM MA334B		
Product code	Item code	Item description
		SIGHTING, TRACKING, AND FIRE-CONTROL EQUIPMENT, OPTICAL TYPE <i>(Report value only)</i>
3333141101	8379	Made from lenses, prisms, etc., produced in this plant
3333141103	8389	Made from purchased lenses, prisms, etc.
3333141104	8390	Sighting and tracking laser systems and equipment
3333141105	8391	Parts and accessories
XXX	8399	Total sighting, tracking, and fire-control equipment (optical type) (<i>Sum of item codes 8379–8391</i>)
		SELECTED NONMANUFACTURING REVENUES OF THIS ESTABLISHMENT <i>(Report value only)</i>
9995065000	9955	Supplies and accessories shipped without further manufacture, for use with selected instruments
9997372000	9960	Software services (including receipts from all nonhardware related activities)
9997373200	9965	Systems integration revenues, including configuration, installation and site preparation, and custom programming
9999998049	9970	Research and development, testing and evaluation of systems and components
9999998059	9975	Other nonmanufacturing revenues
NOTES		